

From: [Laurie Mann](#)
To: [Mann, Laurie](#)
Subject: Fw: Question on Request for TetraTech on Budd Inlet Modelling Review Project
Date: Tuesday, May 09, 2017 1:30:59 PM

----- Forwarded by Laurie Mann/R10/USEPA/US on 05/09/2017 01:30 PM -----

From: "Kendra, Will (ECY)" <wken461@ECY.WA.GOV>
To: Laurie Mann/R10/USEPA/US@EPA,
Cc: Ragsdale.Dave@mintra.epa.gov
Date: 11/03/2011 12:25 PM
Subject: RE: Question on Request for TetraTech on Budd Inlet Modelling Review Project

This was the earlier review I mentioned. Their focus was primarily on the Deschutes River model, and not the separate Capital Lake/Budd Inlet model (although they did provide some comments on that model as well). In the past 6 months we have made some significant changes to this model, so we would like to have someone review those changes, in particular the modeling of marine phytoplankton dynamics. Cadmus would be fine as long as they have expertise in 3-D water quality modeling in estuary and freshwater systems, in particular, expertise in modeling phytoplankton in marine systems.

Part of our ongoing revision of this report includes addressing remaining comments from the initial Cadmus review. That will be done by the end of December. However, I was not aware that Cadmus was waiting for a response from us. I can check with Mindy on that if you want me to.

-----Original Message-----
From: Mann.Laurie@epamail.epa.gov [<mailto:Mann.Laurie@epamail.epa.gov>]
Sent: Thursday, November 03, 2011 11:01 AM
To: Kendra, Will (ECY)
Cc: Ragsdale.Dave@epamail.epa.gov
Subject: Fw: Question on Request for TetraTech on Budd Inlet Modelling Review Project

Will,
We actually have a contract with Cadmus that would allow us to give this work to Cadmus (the money remaining in the overall contract is more than the \$2700 remaining from the task that Jayne mentions below). Would having this work done by Cadmus be okay with you? If so, let me know & I'll have Jayne check on their availability for January.
thanks,
Laurie

Laurie Mann 206.553.1583
U.S. Environmental Protection Agency
Environmental Engineer
TMDL Program
1200 Sixth Avenue, Suite 900, OWW-134
Seattle, WA 98101-3140
<http://www.epa.gov/r10earth/tmdl.htm>

----- Forwarded by Laurie Mann/R10/USEPA/US on 11/03/2011 10:58 AM -----

From: Jayne Carlin/R10/USEPA/US
To: Laurie Mann/R10/USEPA/US@EPA
Date: 11/03/2011 10:38 AM
Subject: Question on Request for TetraTech on Budd Inlet Modelling Review Project

Hi Laurie:

How does this project differ from the Cadmus Task Order (see attachment)? (See attached file: Task Order 013.pdf)

Attached are both the technical approach and Cadmus' review which was submitted on February 4, 2009 and discussed with Ecology on February 19, 2009. Since that time, Ecology has yet to provide Cadmus with a response. Cadmus has periodically checked in without any progress on Ecology's end. Around 20K was provided for this project and there is around \$2700 remaining. (See attached file: Budd Inlet GEMMS Model Review (draft 2-4-09).pdf) (See attached file: GEMSS Model Review Technical Approach (draft 12-15-08).pdf)

Cadmus contact is Laura Blake and Ecology Contact is Mindy Roberts.

Regards,

Jayne Carlin, Task Order Manager
Watersheds Unit
US EPA, Region 10
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From: Laurie Mann/R10/USEPA/US
To: Jayne Carlin/R10/USEPA/US@EPA
Date: 11/03/2011 08:14 AM
Subject: Fw: Request for TetraTech contractual services

Jayne,
Ecology has a very specific request (see Will's e-mail below). Could you please find out whether Tetra Tech has the capacity to do this work
- both the modeling work (GEMSS) and the timing (January 2012)?
thanks,
Laurie

Laurie Mann 206.553.1583
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Environmental Engineer
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----- Forwarded by Laurie Mann/R10/USEPA/US on 11/03/2011 08:13 AM -----

From: "Kendra, Will (ECY)" <wken461@ECY.WA.GOV>
To: Laurie Mann/R10/USEPA/US@EPA
Date: 11/03/2011 07:50 AM
Subject: Request for TetraTech contractual services

Hi Laurie, here is a brief synopsis of what we are looking for:

Ecology requests an independent review of its recent Budd Inlet/Capitol Lake water quality modeling work, conducted in support of a TMDL. We used the model GEMSS (Generalized Environmental Modeling System for Surface waters, developed by Environmental Resource Management, Inc.). A numerical model was considered to be a critical tool to quantify the relationships between human sources of nutrient loading at many different locations and the response of DO concentrations in the various sensitive areas. A three-dimensional hydrodynamic and water quality model of Budd Inlet and Capitol Lake was developed for this purpose. The water quality model simulates the concentrations of DO in response to primary production of phytoplankton, which is limited by light, temperature, and nutrient concentrations. Other important processes that affect DO are also included in the model (e.g. oxidation of organic material, reaeration, sediment oxygen demand, and nitrification). The model includes more than 15 water quality state variables and over 50 kinetic processes among these variables.

The purpose of the review would be to verify that the model adequately represents physical and biological processes; specifically phytoplankton kinetics (exchange of material between phytoplankton, water, and sediments). Expertise in 3-dimensional water quality modeling in estuary and freshwater systems is needed, and in particular, expertise in modeling phytoplankton in marine systems.

We estimate cost to be about \$15 - \$20K. We would like this work to be conducted in January 2012.